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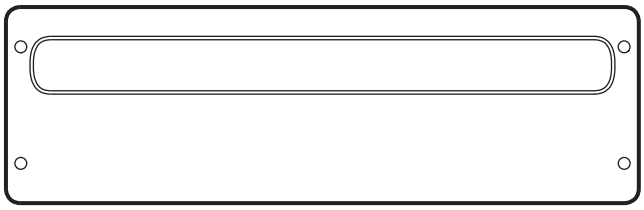
Service Manual



RENAULT Genuine
RDS-TMC LW/MW/FM Tuner
Audio Unit

Model EN-1286S-A
(Genuine number 28013 JY00A)

SPECIFICATIONS

Radio section

Tuning system:	PLL frequency synthesizer system	
Receive range:	LW	144kHz to 288kHz
	MW	531kHz to 1,629kHz
	FM	87.5MHz to 108.0MHz
Quieting sensitivity:	LW	Less than 30dBuV (at 20dB S/N)
	MW	Less than 25dBuV (at 20dB S/N)
	FM	Less than 15dBuV (at 30dB S/N)
S/N:	LW	More than 45dB (74dBuV,0dB=VOL MAX)
	MW	More than 45dB (74dBuV,0dB=VOL MAX)
	FM	More than 50dB (65dBuV,0dB=VOL MAX)
Stereo separatrion:	FM	More than 20dB (65dBuV,1kHz, MOD 75kHz-Dev)
		More than 10dB (65dBuV,7kHz, MOD 75kHz-Dev)
Auto tuning stop sensivity:		
	LW	32 +6/-6 dBu
	MW	30 +6/-6 dBu
	FM	27 +6/-6 dBu

External 6CD changer / AUX Input section

Separation:	More than 60dB (IN 1kHz,1.2V,OUT 0dB=VOL MAX)
S/N:	More than 80dB (IN 1kHz, 1.2V,OUT 0dB=VOL MAX)
Distortion:	Less than 0.1%(IN 1kHz, 1.2V)

General

Load impedance:	2k ohm Pre out/ 4ch
Maximum output:	3.9V+/-2dB
B/U consumption:	Less than 0.25A
Power supply voltage:	13.2V DC(10.5V to 16V)
Ground:	Negative
Dimensions(mm):	187.4(W) x 58.2(H) x 172.7(D)
Weight:	Approx. 0.8kg

NOTES

* The tuner of this unit is DSP-TUNER type. When the tuner pack(BL101) is exchanged, it is necessary to adjust for S-meter etc. with special JIG.
* Individual data of each unit is recorded in EEPROM IC(IC401). When EEPROM IC is replaced, it is necessary to write the data.
* DSP IC(IC201) is fixed with solder. Special JIG is necessary for removing it.
* We cannot supply PWB with component parts in principle. When a circuit on PWB has failure, please repair it by component parts base. Parts which are not mentioned in service manual are not supplied.
* Specifications and design are subject to change without notice for further improvement.

COMPONENT

EN-1286S-A

1.	Main unit	----------	1

To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
   The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.
   The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.
   For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.
   If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.
3. Check for safety after repair.
   Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots.
   If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to the parts for the automobile.
   Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
5. Cautions in soldering
   Please do not spread liquid flux in soldering.
   Please do not wash the soldering point after soldering.
6. Cautions in soldering for chip capacitors
   Please solder the chip capacitors after pre-heating for replacement because they are very weak to heat.
   Please do not heat the chip capacitors with a soldering iron directly.
7. Cautions in handling for chip parts.
   Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc).
   Please make an operation test after replacement.
8. Cautions in handling flexible PWB
   Before working with a soldering iron, make sure that the iron tip temperature is around 270℃. Take care not to apply the iron tip repeatedly(more than three times)to the same patterns. Also take care not to apply the tip with force.
9. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

TROUBLESHOOTING

Power doesn't turn on

	CHECK ITEM	CHECK POINT
1	Power supply of B/U and ACC	ACC: Q301,D301,D302 VDD+5V: IC503,D506 B/U DET: IC504
2	Display	CAN Line: IC403
3	Key operation	CAN Line: IC402 SYS+5V: Q506
4	-----	Around IC402 and IC403

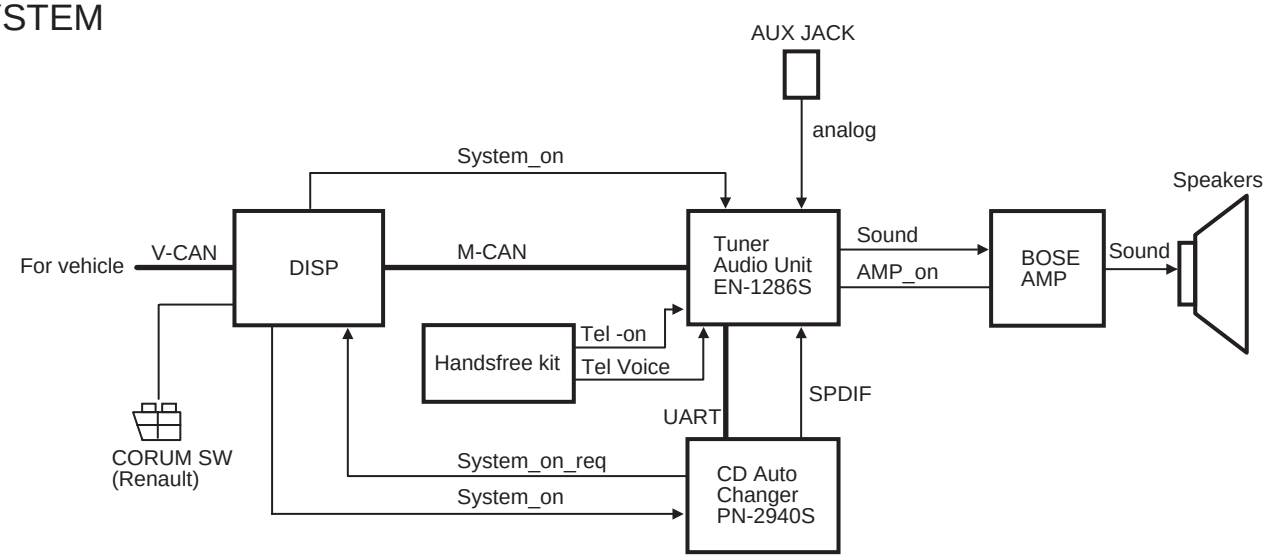
No sound

	CHECK ITEM	CHECK POINT
1	Key operation	Audio CPU: IC402
2	Power supply of IC201 (DSP)	SYS+3.3V: IC501 DSP1.8V: IC209
3	Output wave form of IC201 (DSP)	Line between IC402 and IC201
4	Output wave form of IC301 (20k LPF)	SYS+9V: IC502 1/2 SYS+9V: IC302 Around IC301
5	Output wave form of IC700 and IC701 (Pre-AMP)	Around IC700 and IC701
6	-----	Confirm whether the output load is 4ohm etc.

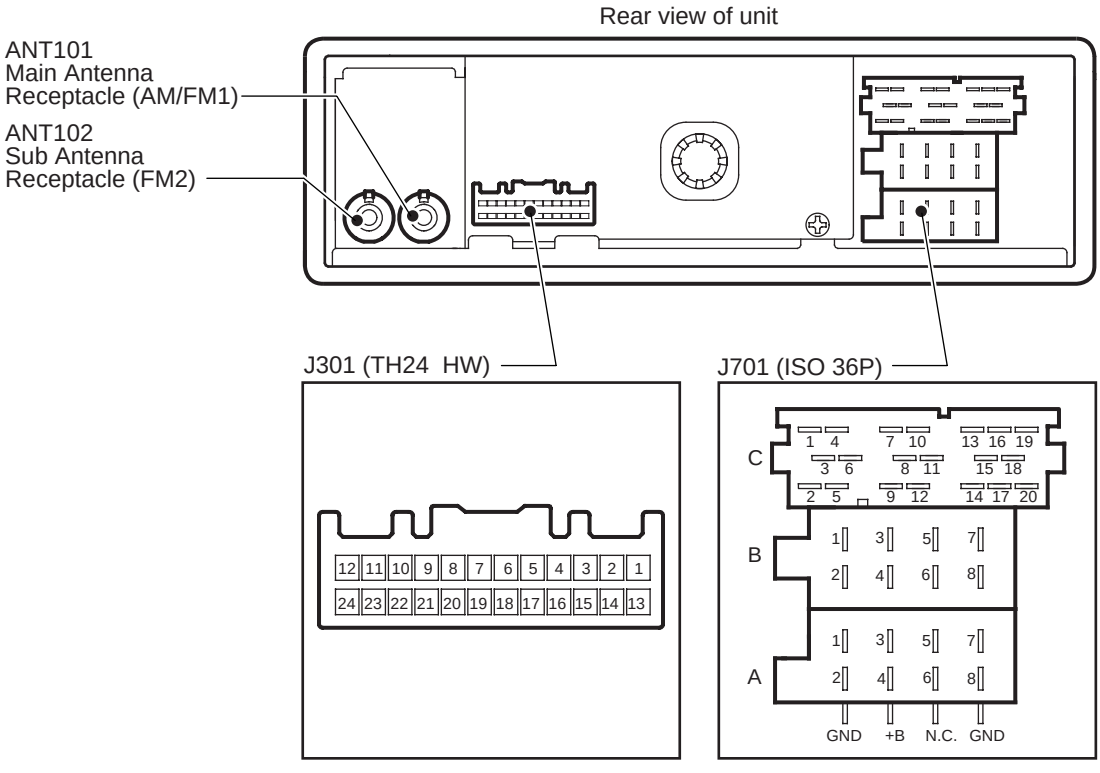
Radio doesn't work.

	CHECK ITEM	CHECK POINT
1	Input of antenna	Connection of antenna
2	SEEK	Tuner pack and ANT line
3	TUN+9V, TUN+5V	TUN+9V: Q503 TUN+5V: Q501
4	Line between tuner and IC402	Tuner-I2C line Output wave form of CCT401, R415 and R416
5	Output of IF-signal	Tuner pack BL101
6	-----	DSP: IC201

SYSTEM



CONNECTORS



No.	Pin Name	No.	Pin Name
1	M-CAN H1	13	M-CAN H2
2	M-CAN L1	14	M-CAN L2
3	ZT-L	15	ZT-H
4	NC	16	NC
5	IR-OUT	17	IR-GND
6	NC	18	IR-SIG
7	NC	19	INPUT SYS-ON
8	NC	20	NC
9	SPDIF GND	21	NC
10	NAVI IN(-)	22	NAVI IN(+)
11	TEL GND	23	NAVI GND
12	TEL IN(-)	24	TEL IN(+)

A

No.	Pin Name
1	NC
2	GND
3	NC
4	B/U
5	NC
6	NC
7	NC
8	GND

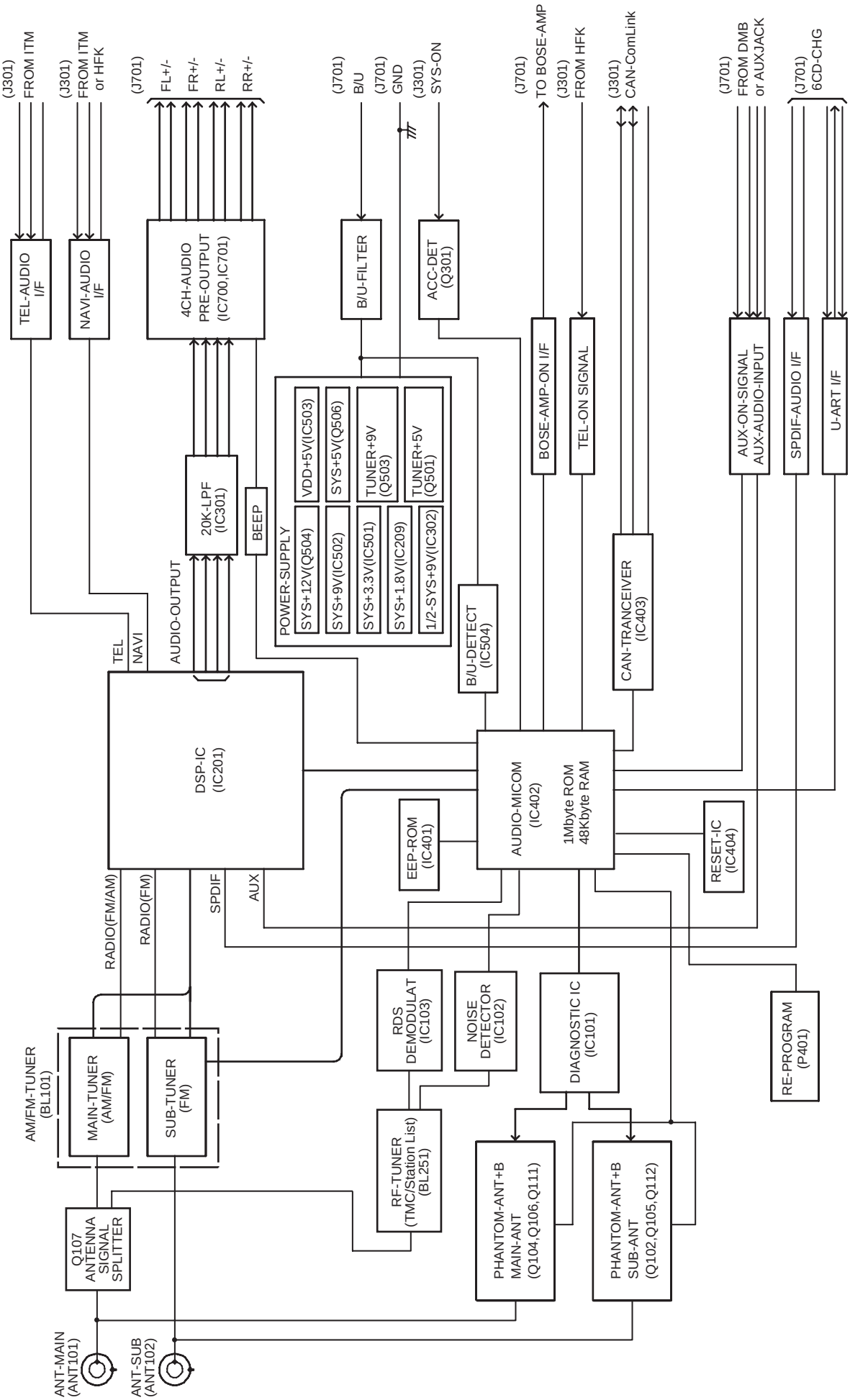
B

No.	Pin Name
1	REAR RCH(+)
2	REAR RCH(-)
3	FRONT RCH(+)
4	FRONT RCH(-)
5	FRONT LEFT(+)
6	FRONT LEFT(-)
7	REAR LEFT(+)
8	REAR LEFT(-)

C

No.	Pin Name	No.	Pin Name
1	EXT-AMP ON	11	N.C.
2	INFO LINE IN	12	(S-WOOF-SHD)
3	INFO LINE REF	13	UART TX
4	LINE IN RCH	14	UART RX
5	SHIELD AUDIO	15	UART GND
6	LINE IN LCH	16	NC
7	N.C.	17	UART REQ
8	N.C.	18	SPDIF-CDC
9	EXT-AMP ON	19	SPDIF-GND
10	N.C.	20	CDC-GND

BLOCK DIAGRAM



EXPLANATION OF IC

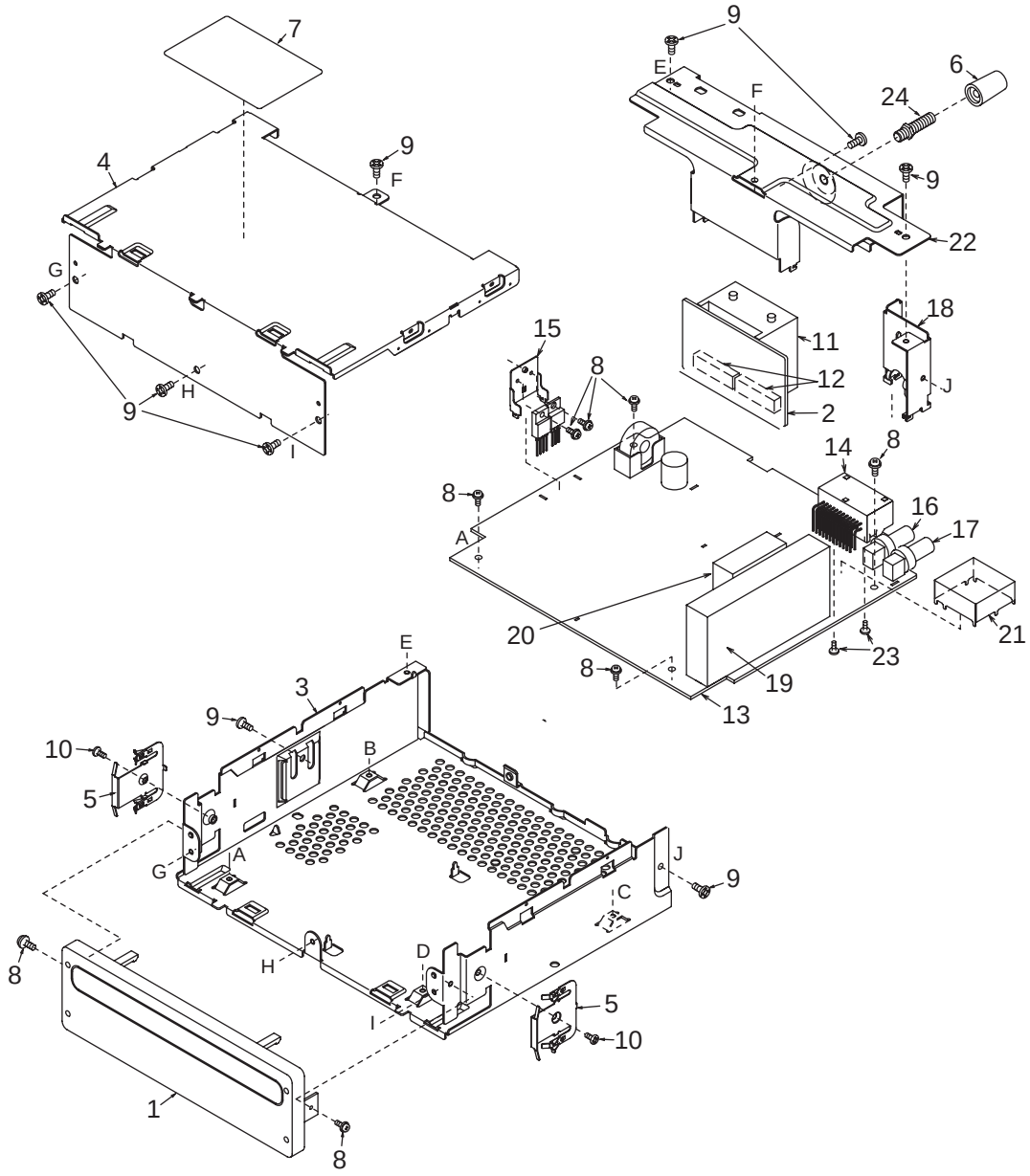
052-0315-00 M30879FLAGP Microcomputer

[NOTE]

When this IC is exchanged, it is necessary to write the program because the program is not written in this IC.

pin 1: NU : - : Not in use.
pin 2: IRI : IN : The remote control signal input.
pin 3: ST EEP SDA : I/O: Serial data input/output for the Sub-tuner and the EEPROM.
pin 4: ST EEP CK : O : Serial clock output to the Sub-tuner and the EEPROM.
pin 5: BU DET : IN : Backup detection signal input.
pin 6: BYTE : IN : Data length selection(8bit/16bit).
pin 7: CN VSS : IN : Connect to VSS via a resistor.
pin 8: NU : O : Not in use.
pin 9: SYS ON : O : System ON signal output.
pin 10: RESET : IN : Reset signal input.
pin 11: X out : O : Crystal connection.
pin 12: VSS : - : Negative voltage supply.
pin 13: X in : IN : Crystal connection.
pin 14: VCC : - : Positive voltage supply.
pin 15: NMI : IN : Nonmaskable interrupt. Connect to VDD via a resistor.
pin 16: SYS ON IN : IN : System ON signal input.
pin 17: M CAN RX : IN : M-CAN serial data input.
pin 18: M CAN TX : O : M-CAN serial data output.
pin 19: PIC DIAG 1 : IN : Power IC diagnosis signal input.
pin 20: NDS RX : IN : NDS serial data input from NDS-A/C.
pin 21: NDS REQ : IN : The request pulse from NDS.
pin 22: NDS TX : O : NDS serial data output to NDS-A/C.
pin 23: PIC STND 1 : O : Power IC standby signal output.
pin 24: BEEP : O : Beep out.
pin 25: EXT AMP ON : O : ON signal output for the external amplifier.
pin 26: NU : - : Not in use.
pin 27: MT SCK : O : Serial clock output to the Main-tuner.
pin 28: MT SDA : I/O: Serial data input/output for Main-tuner.
pin 29: DSP/P-IC CK : O : DSP/Power-IC clock pulse output.
pin 30: DSP/P-IC DA : I/O: DSP/Power-IC serial data input/output.
pin 31: FLASH CK : IN : Flash memory Clock.
pin 32: FLASH BUSY : O : Flash memory busy signal output.
pin 33: PIC STND 2 : O : Power IC standby signal output.
pin 34: NU : O : Not in use.
pin 35: NU : O : Not in use.
pin 36: PIC DIAG 2 : IN : Power IC diagnosis signal input.
pin 37: NU : O : Not in use.
pin 38: A DIAG ON : O : Diagnosis control signal output for the external-amplifier-on-signal-line.
pin 39: FLASH EPM : O : Flash memory EPM.
pin 40: A DIAG C : IN : Open detection signal input for the external-amplifier-on-signal-line.
pin 41: A DIAG S : IN : Short detection signal input for the external-amplifier-on-signal-line.
pin 42: NU : O : Not in use.
pin 43: NU : O : Not in use.
pin 44: FLASH CE : O : Flash memory Chip enable.
pin 45: NU : O : Not in use.
pin 46: NU : O : Not in use.
pin 47: NU : O : Not in use.
pin 48: NU : O : Not in use.
pin 49: NU : O : Not in use.
pin 50: NU : O : Not in use.
pin 51: NU : O : Not in use.
pin 52: NU : O : Not in use.
pin 53: NU : O : Not in use.
pin 54: NU : O : Not in use.
pin 55: DSP INT : IN : Initial signal input from the DSP IC.
pin 56: MT MUTE : O : Main-tuner mute output.
pin 57: MT SAMPLE : IN : Main-tuner sample input.
pin 58: NU : O : Not in use.
pin 59: ST SAMPLE : IN : Sub-tuner sample input.
pin 60: VDD : - : Positive voltage supply.
pin 61: NU : O : Not in use.
pin 62: GND : - : Ground.
pin 63: ST HOLD : IN : AF-hold-signal input from the Sub-tuner. And M-hold signal input from the DSP.
pin 64: ST S METER : IN : Input of internal A/D converter to monitor the radio field strength for the Sub-tuner.
pin 65: NU : O : Not in use.
pin 66: DSP PAUSE : IN : DSP automatic mute control. L = mute on.
pin 67: MT HOLD : IN : AF-hold-signal input from the Main-tuner. And S-hold signal input from the DSP.
pin 68: MT S METER : IN : Input of internal A/D converter to monitor the radio field strength for the Main-tuner.
pin 69: NU : O : Not in use.
pin 70: RDS DA 2 : IN : RDS 2 serial data input. (Sub-tuner)
pin 71: RDS CL 3 : IN : RDS 3 serial clock input. (TMS)
pin 72: RDS CL 2 : IN : RDS 2 serial clock input. (Sub-tuner)
pin 73: RDS CL 1 : IN : RDS 1 serial clock output. (Main-tuner)
pin 74: RDS DA 1 : IN : RDS 1 serial data input. (Main-tuner)
pin 75: RDS DA 3 : IN : RDS 3 serial data input. (TMS)
pin 76: M AGC DET : IN : Main-tuner AGC detection.
pin 77: S AGC DET : IN : Sub-tuner AGC detection.
pin 78: DSP RESET : O : Reset signal output to the DSP IC.
pin 79: NU : O : Not in use.
pin 80: NU : O : Not in use.
pin 81: NU : O : Not in use.
pin 82: NU : O : Not in use.
pin 83: NU : O : Not in use.
pin 84: RT N OFF : O : Noise clear signal output to the TMC-tuner.
pin 85: RT NOISE : IN : Input terminal of the internal ADC to sense the RDS-noise-level from the TMC-tuner.
pin 86: RT S METER : IN : Input terminal of internal A/D converter to monitor the radio field strength for the TMC-tuner.
pin 87: PHA ON 1 : O : Phantom circuit ON signal output for Antenna-1.
pin 88: STBY : O : The standby signal output.
pin 89: WAR : IN : Warning signal input from DIAGNOSTIC PROCESSOR.
pin 90: PHA ON 2 : O : Phantom circuit ON signal output for Antenna-2.
pin 91: PHA DIAG B 1 : IN : Phantom power supply line short detection signal input.
pin 92: P/L : O : The resistance changing-signal output for the diagnosis IC.
pin 93: PHA DIAG B 2 : IN : Phantom power supply line short detection signal input.
pin 94: A VSS : - : Analog ground.
pin 95: INFO AUX IN : IN : 0V="+B", 3V="Open", 5V="Ground"
pin 96: Vref : - : Reference voltage.
pin 97: A VCC : - : Positive voltage supply for the internal analog section.
pin 98: DIAG TMC CK : O : Diagnosis & TMC serial clock output.
pin 99: DIAG TMC DA : I/O: Diagnosis & TMC serial data input/output.
pin100: TUNER ON : O : The tuner ON signal output.

EXPLODED VIEW / PARTS LIST



NO.	PART NO.	DESCRIPTION	Q'TY
1	370-6114-10	ESCUTCHEON	1
2	----------	SUB PWB	1
3	311-1928-00	LOWER CASE	1
4	310-1838-00	UPPER CASE	1
5	750-6771-00	SIDE SPRING	2
6	345-5403-00	REAR HOLDER	1
7	276-0258-00	SETPLATE	1
8	716-0878-50	SCREW(M2.6x5)	8
9	714-2606-8B	MACHINE SCREW(M2.6x6)	9
10	714-3006-4B	MACHINE SCREW(M3x6)	2
11	074-1159-01	OUTLET SOCKET(ISO 36P)	1
12	076-0324-12	PLUG	2

NO.	PART NO.	DESCRIPTION	Q'TY
13	----------	MAIN PWB	1
14	074-1302-24	OUTLET SOCKET(TH24)	1
15	331-3835-00	TR HOLDER	1
16	092-2229-00	ANT-RECEPT(W)	1
17	092-2230-00	ANT-RECEPT(Y)	1
18	331-4265-00	ANT-HOLDER	1
19	880-2026B	TUNER PACK	1
20	880-1761A	TMC TUNER PACK	1
21	331-4267-00	SHIELD CASE	1
22	307-0726-00	REAR-CVR	1
23	778-3006-00	TAP-SCREW(M3x5)	2
24	716-3573-00	REAR BOLT(M5)	1

ELECTRICAL PARTS LIST

Sub PWB(B1) section

REF No.	PART No.	DESCRIPTION
C704	168-2222-55	2200pF K
C705	168-2222-55	2200pF K
C706	168-2222-55	2200pF K
C707	168-2222-55	2200pF K
C708	168-2222-55	2200pF K

REF No.	PART No.	DESCRIPTION
C709	168-2222-55	2200pF K
C710	168-2222-55	2200pF K
C711	168-2222-55	2200pF K
J701	074-1159-01	OUTLET SOCKET
L601	010-3604-90	ZJYS51R5-2PB

REF No.	PART No.	DESCRIPTION
P701	076-0324-12	PLUG(12P)
P702	076-0324-12	PLUG(12P)
PWB	039-2967-00	PWB(WITHOUT COMPONENT)

Main PWB(B2) section

REF No.	PART No.	DESCRIPTION
ANT101	092-2229-00	ANT-RECEPT
ANT102	092-2230-00	ANT-RECEPT
BL101	880-2026B	TUNER PACK
BL251	880-1761A	TMC TUNER PACK
C101	166-1801-50	18pF CH
C102	166-8097-50	8pF C CH
C103	166-3301-50	33pF CH
C104	168-4732-78	0.047uF K
C105	166-2201-50	22pF CH
C106	166-4701-50	47pF CH
C108	168-1222-55	1200pF K
C109	168-1022-55	1000pF K
C111	168-4732-78	0.047uF K
C112	168-1042-78	16V 0.1uF
C113	168-3932-78	0.039uF K
C114	168-1222-55	1200pF K
C115	168-4732-78	0.047uF K
C116	163-1073-35	16V 100uF
C117	166-4096-50	4pF CH
C118	163-1073-35	16V 100uF
C119	166-3301-50	33pF CH
C121	168-4732-78	0.047uF K
C122	166-1511-50	150pF CH
C123	168-4732-78	0.047uF K
C124	168-4732-78	0.047uF K
C125	166-1801-50	18pF CH
C126	163-1063-35	16V 10uF
C127	166-1801-50	18pF CH
C128	166-2201-50	22pF CH
C129	168-1022-55	1000pF K
C130	168-2222-55	2200pF K
C131	163-1063-35	16V 10uF
C132	166-1011-50	100pF CH
C133	168-4732-78	0.047uF K
C134	166-1011-50	100pF CH
C135	168-3322-55	3300pF K
C136	163-1063-35	16V 10uF
C137	168-1022-55	1000pF K
C138	168-1022-55	1000pF K
C139	163-1063-35	16V 10uF
C140	168-2232-55	0.022uF K
C141	168-2232-55	0.022uF K
C142	168-1022-55	1000pF K
C143	163-1073-35	16V 100uF
C144	168-2222-55	2200pF K
C145	168-4732-78	0.047uF K
C146	166-1011-50	100pF CH
C147	166-1011-50	100pF CH
C148	168-4732-78	0.047uF K
C149	168-1022-55	1000pF K
C150	168-1022-55	1000pF K
C151	163-4763-15	6.3V 47uF
C152	178-1042-78	0.1uF
C153	168-1022-55	1000pF K
C154	163-1073-35	16V 100uF
C155	166-5611-50	560pF CH
C156	168-1022-55	1000pF K
C157	168-1032-55	0.01uF K
C158	166-4701-50	47pF CH
C159	166-3311-50	330pF CH
C160	168-1042-78	16V 0.1uF
C161	178-2255-79	2.2uF

REF No.	PART No.	DESCRIPTION
C162	166-5601-50	56pF CH
C163	166-2701-50	27pF CH
C164	119-0000-05	1/10W 0 ohm JW
C180	163-1073-35	16V 100uF
C201	168-1022-55	1000pF K
C202	168-1022-55	1000pF K
C203	168-1022-55	1000pF K
C204	168-1022-55	1000pF K
C205	166-1011-50	100pF CH
C206	168-1042-78	16V 0.1uF
C207	163-4753-65	50V 4.7uF
C209	166-1011-50	100pF CH
C210	178-2255-79	2.2uF
C211	178-2255-79	2.2uF
C214	166-1007-50	10pF CH
C215	166-1007-50	10pF CH
C216	168-1022-55	1000pF K
C217	043-0559-90	6.3V 22uF
C218	168-1022-55	1000pF K
C220	166-1011-50	100pF CH
C221	163-4753-65	50V 4.7uF
C222	168-1042-78	16V 0.1uF
C223	168-1042-78	16V 0.1uF
C224	163-4753-65	50V 4.7uF
C225	166-1511-50	150pF CH
C226	166-1511-50	150pF CH
C227	166-1011-50	100pF CH
C228	166-1011-50	100pF CH
C229	166-1011-50	100pF CH
C232	168-2232-55	0.022uF K
C233	163-2273-25	10V 220uF
C234	166-1011-50	100pF CH
C235	168-4732-78	0.047uF K
C236	042-0560-63	16V 22uF
C237	168-1222-55	1200pF K
C239	163-1063-35	16V 10uF
C240	163-4753-65	50V 4.7uF
C241	168-2232-55	0.022uF K
C242	168-1022-55	1000pF K
C243	168-1042-78	16V 0.1uF
C244	163-1073-35	16V 100uF
C245	168-1052-78	1uF
C246	168-3932-78	0.039uF K
C248	168-1022-55	1000pF K
C249	168-1032-55	0.01uF K
C250	168-3322-55	3300pF K
C251	168-3322-55	3300pF K
C252	166-5611-50	560pF CH
C253	168-3322-55	3300pF K
C254	168-2232-55	0.022uF K
C257	168-1022-55	1000pF K
C258	168-3322-55	3300pF K
C260	042-0560-63	16V 22uF
C262	168-1052-78	1uF
C267	042-0560-63	16V 22uF
C268	168-1042-78	16V 0.1uF
C269	163-3373-15	6.3V 330uF
C272	163-2273-25	10V 220uF
C275	168-1042-78	16V 0.1uF
C277	168-2222-55	2200pF K
C278	168-2222-55	2200pF K
C279	168-2222-55	2200pF K

REF No.	PART No.	DESCRIPTION
C280	168-2222-55	2200pF K
C282	168-2232-55	0.022uF K
C283	168-2232-55	0.022uF K
C284	166-1011-50	100pF CH
C301	168-1042-78	16V 0.1uF
C302	168-1042-78	16V 0.1uF
C303	168-1042-78	16V 0.1uF
C304	168-1042-78	16V 0.1uF
C305	166-5611-50	560pF CH
C306	166-5611-50	560pF CH
C307	166-5611-50	560pF CH
C308	166-5611-50	560pF CH
C310	163-2273-25	10V 220uF
C311	168-2212-55	220pF K
C312	163-4763-35	16V 47uF
C313	166-2201-50	22pF CH
C314	166-2201-50	22pF CH
C319	166-2201-50	22pF CH
C320	166-2201-50	22pF CH
C325	166-5611-50	560pF CH
C326	166-5611-50	560pF CH
C327	166-5611-50	560pF CH
C328	166-5611-50	560pF CH
C329	166-2201-50	22pF CH
C339	168-8222-55	8200pF K
C340	168-8222-55	8200pF K
C342	168-8222-55	8200pF K
C343	168-8222-55	8200pF K
C344	168-4732-78	0.047uF K
C345	168-4732-78	0.047uF K
C346	168-4732-78	0.047uF K
C347	168-4732-78	0.047uF K
C354	168-1052-78	1uF
C360	168-4722-55	4700pF K
C401	168-1045-56	0.1uF Z
C402	168-1045-56	0.1uF Z
C403	166-2201-50	22pF CH
C404	166-2201-50	22pF CH
C406	166-1201-50	12pF CH
C407	166-1201-50	12pF CH
C408	168-1045-56	0.1uF Z
C409	168-1045-56	0.1uF Z
C410	163-4763-15	6.3V 47uF
C411	168-1045-56	0.1uF Z
C412	168-1032-55	0.01uF K
C413	168-1032-55	0.01uF K
C414	168-1042-78	16V 0.1uF
C415	166-1011-50	100pF CH
C416	168-1022-55	1000pF K
C417	168-1022-55	1000pF K
C418	168-1022-55	1000pF K
C419	168-2232-55	0.022uF K
C420	163-1073-35	16V 100uF
C422	168-2232-55	0.022uF K
C423	168-1052-78	1uF
C501	168-1042-78	16V 0.1uF
C502	042-0560-63	16V 22uF
C503	163-1073-35	16V 100uF
C504	168-1042-78	16V 0.1uF
C505	166-1511-50	150pF CH
C506	042-0579-51	16V 10uF
C507	042-0579-51	16V 10uF

REF No.	PART No.	DESCRIPTION
C508	168-1042-78	16V 0.1uF
C509	042-0427-94	16V 47uF TAN
C510	168-1042-78	16V 0.1uF
C511	168-1042-78	16V 0.1uF
C512	042-1679-00	25V 100uF
C513	168-2232-55	0.022uF K
C514	189-1083-32	16V 1000uF
C515	172-1041-15	0.1uF
C702	168-1032-55	0.01uF K
C703	168-1032-55	0.01uF K
C704	043-0548-50	2.2uF
C705	043-0548-50	2.2uF
C706	166-5601-50	56pF CH
C707	166-5601-50	56pF CH
C712	166-5601-50	56pF CH
C713	166-5601-50	56pF CH
C714	168-1032-55	0.01uF K
C715	168-1032-55	0.01uF K
C716	043-0548-50	2.2uF
C717	043-0548-50	2.2uF
C718	166-5601-50	56pF CH
C719	166-5601-50	56pF CH
C724	166-5601-50	56pF CH
C725	166-5601-50	56pF CH
C726	163-3363-25	10V 33uF
C727	163-3363-25	10V 33uF
C728	163-3363-25	10V 33uF
C729	163-3363-25	10V 33uF
C730	163-3363-25	10V 33uF
C731	163-3363-25	10V 33uF
C732	163-3363-25	10V 33uF
C733	163-3363-25	10V 33uF
CCT201	050-0140-57	1/32W 10k ohm x4J
CCT202	050-0140-57	1/32W 10k ohm x4J
CCT401	050-0140-57	1/32W 10k ohm x4J
D101	001-0580-90	1SS352
D102	001-0594-90	HVM187S
D103	001-0580-90	1SS352
D104	001-0530-90	1SS271
D105	001-0580-90	1SS352
D106	001-2403-90	M1F60
D107	001-2403-90	M1F60
D108	001-0367-91	1SS226
D301	001-0529-34	MA8062-L
D302	001-2412-90	RR264M-400
D305	001-0580-90	1SS352
D312	001-0580-90	1SS352
D401	001-0580-90	1SS352
D402	001-0580-90	1SS352
D403	001-4305-39	UDZSTE-17 36B
D404	001-0529-44	MA8082-M
D406	001-0529-47	MA8091-M
D407	001-0529-47	MA8091-M
D501	001-0580-90	1SS352
D502	001-0529-32	MA8056-M
D503	001-0529-48	MA8091-H
D504	001-0580-90	1SS352
D505	001-0580-90	1SS352
D506	001-2412-90	RR264M-400
D507	001-2015-00	RL253
IC101	051-2802-90	TDA7476
IC102	051-3034-90	NJM4558V
IC103	051-4607-90	SAA6581T
IC201	----------	SAF7730HV/N317
IC209	125-7007-90	Si5441BDC-TI-E3
IC301	051-3019-90	NJM2060V
IC302	051-3034-90	NJM4558V
IC401	051-9424-90	BR24L16FVM-WTR
IC402	052-0315-00	M30879FLAGP
IC403	051-6607-08	PCA82C250T-T
IC404	051-5420-08	S-80943CNMC-G9D
IC501	051-3343-00	NJM2396F33
IC502	051-3340-00	LD1085P

REF No.	PART No.	DESCRIPTION
IC503	051-3341-90	BD3931FP
IC504	051-5418-08	S-80827ANMP-EDQ
IC700	051-3019-90	NJM2060V
IC701	051-3019-90	NJM2060V
J301	074-1302-24	TH24P-SOCKET
L101	010-2174-58	4.7uH
L102	010-2174-58	4.7uH
L103	010-2200-05	2.2mH
L104	010-2198-54	0.18uH
L105	010-2198-65	0.1uH
L106	010-2198-62	0.27uH
L107	010-2198-84	0.68uH
L108	010-8037-00	0.315uH
L109	010-8037-01	0.85uH
L110	010-3406-66	22uH J
L111	010-2003-04	30uH
L112	010-2174-86	1mH
L113	010-3103-68	2.5k ohm/100MHz
L114	010-2174-66	22uH
L116	010-2198-61	0.12uH
L120	010-2174-56	3.3uH
L130	010-2200-05	2.2mH
L167	117-0000-05	1/8W 0 ohm JW
L168	010-2198-50	0.15uH
L201	010-3105-62	1k ohm/100MHz
L202	010-3105-62	1k ohm/100MHz
L203	010-3105-62	1k ohm/100MHz
L204	010-3105-62	1k ohm/100MHz
L205	010-3105-62	1k ohm/100MHz
L206	010-2285-80	1k ohm/100MHz
L208	010-3105-62	1k ohm/100MHz
L210	010-2285-80	1k ohm/100MHz
L211	010-3105-62	1k ohm/100MHz
L212	010-2285-80	1k ohm/100MHz
L213	010-2285-80	1k ohm/100MHz
L214	010-3105-62	1k ohm/100MHz
L215	010-3105-62	1k ohm/100MHz
L216	010-3105-62	1k ohm/100MHz
L218	010-3105-62	1k ohm/100MHz
L220	010-3103-50	1500 ohm/100MHz
L221	010-3103-50	1500 ohm/100MHz
L222	010-3103-50	1500 ohm/100MHz
L401	010-3601-50	600 ohm/100MHz
L402	010-3406-54	2.2uH J
L501	010-8028-00	520uH
P401	076-0478-59	PLUG (9P)
Q101	192-2223-13	2SC2223-T1B
Q102	190-1162-00	2SA1162
Q103	192-2223-13	2SC2223-T1B
Q104	190-1162-00	2SA1162
Q105	191-1202-61	2SB1202FA
Q106	191-1202-61	2SB1202FA
Q107	126-0222-90	3SK222 V221,22
Q108	193-1306-00	2SD1306
Q109	190-1162-00	2SA1162
Q110	193-1306-00	2SD1306
Q111	125-2020-96	DTC143ZK
Q112	125-2020-96	DTC143ZK
Q113	125-2020-96	DTC143ZK
Q114	125-2004-92	RN1402
Q202	125-2027-91	DTC114EUA
Q203	125-2027-91	DTC114EUA
Q204	125-2027-91	DTC114EUA
Q205	125-2027-91	DTC114EUA
Q206	125-2027-91	DTC114EUA
Q207	125-2027-91	DTC114EUA
Q208	125-2027-91	DTC114EUA
Q209	125-2027-91	DTC114EUA
Q210	125-2027-91	DTC114EUA
Q211	125-2027-91	DTC114EUA
Q212	125-2027-91	DTC114EUA
Q213	125-2027-91	DTC114EUA
Q301	192-4081-00	2SC4081

REF No.	PART No.	DESCRIPTION
Q309	193-0601-00	2SD601A
Q310	125-9017-92	UMD3N-TR
Q311	193-0601-00	2SD601A
Q401	125-2027-91	DTC114EUA
Q402	125-0020-91	UN5111
Q403	192-4081-00	2SC4081
Q404	192-4081-00	2SC4081
Q405	192-4081-00	2SC4081
Q501	191-1197-50	2SB1197K Q,R
Q502	125-2027-90	DTC143EU
Q503	192-5886-00	2SC5886
Q504	191-1205-65	2SB1205 S,T
Q505	192-4081-00	2SC4081
Q506	191-1197-50	2SB1197K Q,R
Q507	125-2027-91	DTC114EUA
R101	119-1821-15	1/10W 1.8k ohm
R102	119-5631-15	1/10W 56k ohm
R103	116-1691-15	1/4W 1.6 ohm
R104	116-1691-15	1/4W 1.6 ohm
R105	119-4711-15	1/10W 470 ohm
R106	116-6291-15	1/4W 6.2 ohm
R107	116-6291-15	1/4W 6.2 ohm
R108	116-6291-15	1/4W 6.2 ohm
R109	119-2221-15	1/10W 2.2k ohm
R110	119-5631-15	1/10W 56k ohm
R111	116-6291-15	1/4W 6.2 ohm
R112	119-2231-15	1/10W 22k ohm
R113	119-3321-15	1/10W 3.3k ohm
R114	119-4721-15	1/10W 4.7k ohm
R115	119-2231-15	1/10W 22k ohm
R116	119-4721-15	1/10W 4.7k ohm
R117	119-1021-15	1/10W 1k ohm
R118	119-1021-15	1/10W 1k ohm
R119	119-1041-15	1/10W 100k ohm
R120	119-4701-15	1/10W 47 ohm
R121	119-1511-15	1/10W 150 ohm
R123	119-4731-15	1/10W 47k ohm
R124	119-6811-15	1/10W 680 ohm
R125	119-6811-15	1/10W 680 ohm
R126	116-2721-15	1/4W 2.7k ohm
R127	116-2721-15	1/4W 2.7k ohm
R128	119-1511-15	1/10W 150 ohm
R129	119-2721-15	1/10W 2.7k ohm
R130	119-3341-15	1/10W 330k ohm
R131	119-6831-15	1/10W 68k ohm
R132	119-1011-15	1/10W 100 ohm
R133	119-1011-15	1/10W 100 ohm
R134	119-2221-15	1/10W 2.2k ohm
R135	119-1001-15	1/10W 10 ohm
R137	119-3341-15	1/10W 330k ohm
R138	119-1011-15	1/10W 100 ohm
R139	119-1011-15	1/10W 100 ohm
R140	119-1011-15	1/10W 100 ohm
R141	119-1011-15	1/10W 100 ohm
R142	119-1011-15	1/10W 100 ohm
R143	119-1011-15	1/10W 100 ohm
R144	119-1821-15	1/10W 1.8k ohm
R145	119-1031-15	1/10W 10k ohm
R146	119-1821-15	1/10W 1.8k ohm
R147	119-4731-15	1/10W 47k ohm
R148	119-2721-15	1/10W 2.7k ohm
R149	119-1231-15	1/10W 12k ohm
R150	119-1041-15	1/10W 100k ohm
R151	119-1011-15	1/10W 100 ohm
R152	119-1511-15	1/10W 150 ohm
R153	119-1011-15	1/10W 100 ohm
R154	119-1011-15	1/10W 100 ohm
R155	119-1011-15	1/10W 100 ohm
R156	119-1011-15	1/10W 100 ohm
R157	116-5691-15	1/4W 5.6 ohm
R158	119-1021-15	1/10W 1k ohm
R159	119-1021-15	1/10W 1k ohm
R201	119-2201-15	1/10W 22 ohm

REF No.	PART No.	DESCRIPTION
R202	119-1831-15	1/10W 18k ohm
R203	119-1831-15	1/10W 18k ohm
R206	119-0000-05	1/10W 0 ohm JW
R207	119-1011-15	1/10W 100 ohm
R208	119-1011-15	1/10W 100 ohm
R209	119-1011-15	1/10W 100 ohm
R210	119-1011-15	1/10W 100 ohm
R211	119-1031-15	1/10W 10k ohm
R212	119-1021-15	1/10W 1k ohm
R213	119-1021-15	1/10W 1k ohm
R214	119-5621-15	1/10W 5.6k ohm
R215	119-1011-15	1/10W 100 ohm
R216	119-5621-15	1/10W 5.6k ohm
R217	119-1011-15	1/10W 100 ohm
R218	119-1001-15	1/10W 10 ohm
R219	119-1051-15	1/10W 1M ohm
R220	119-1041-15	1/10W 100k ohm
R221	119-1041-15	1/10W 100k ohm
R222	119-5621-15	1/10W 5.6k ohm
R223	119-1011-15	1/10W 100 ohm
R224	119-1001-15	1/10W 10 ohm
R225	119-5621-15	1/10W 5.6k ohm
R226	119-1011-15	1/10W 100 ohm
R236	119-1031-15	1/10W 10k ohm
R237	119-1031-15	1/10W 10k ohm
R238	119-1011-15	1/10W 100 ohm
R239	119-1011-15	1/10W 100 ohm
R242	119-1021-15	1/10W 1k ohm
R244	119-1031-15	1/10W 10k ohm
R245	119-4731-15	1/10W 47k ohm
R247	119-4731-15	1/10W 47k ohm
R250	119-4731-15	1/10W 47k ohm
R251	119-1021-15	1/10W 1k ohm
R252	119-1021-15	1/10W 1k ohm
R253	119-1021-15	1/10W 1k ohm
R254	119-1021-15	1/10W 1k ohm
R255	119-4731-15	1/10W 47k ohm
R256	119-4731-15	1/10W 47k ohm
R257	119-1001-15	1/10W 10 ohm
R258	119-4731-15	1/10W 47k ohm
R259	119-4731-15	1/10W 47k ohm
R260	119-4731-15	1/10W 47k ohm
R261	119-4731-15	1/10W 47k ohm
R262	119-4731-15	1/10W 47k ohm
R263	119-4731-15	1/10W 47k ohm
R270	116-2401-15	1/4W 24 ohm
R290	119-3011-15	1/10W 300 ohm
R291	119-3011-15	1/10W 300 ohm
R292	119-2211-15	1/10W 220 ohm
R298	119-1031-15	1/10W 10k ohm
R299	119-1031-15	1/10W 10k ohm
R301	119-1031-15	1/10W 10k ohm
R302	119-1031-15	1/10W 10k ohm
R303	119-1031-15	1/10W 10k ohm
R304	119-1031-15	1/10W 10k ohm
R305	119-1031-15	1/10W 10k ohm
R306	119-1031-15	1/10W 10k ohm
R307	119-1031-15	1/10W 10k ohm
R308	119-1031-15	1/10W 10k ohm
R309	119-1031-15	1/10W 10k ohm
R310	119-1031-15	1/10W 10k ohm
R311	119-1031-15	1/10W 10k ohm
R312	119-1031-15	1/10W 10k ohm
R313	119-1051-15	1/10W 1M ohm
R314	119-1051-15	1/10W 1M ohm
R315	119-1051-15	1/10W 1M ohm
R316	119-1051-15	1/10W 1M ohm
R318	119-1031-15	1/10W 10k ohm
R319	119-1031-15	1/10W 10k ohm

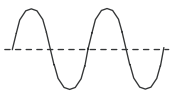
REF No.	PART No.	DESCRIPTION
R320	116-8211-15	1/4W 820 ohm
R321	116-8211-15	1/4W 820 ohm
R322	116-8211-15	1/4W 820 ohm
R323	119-1031-15	1/10W 10k ohm
R324	119-1031-15	1/10W 10k ohm
R325	119-1031-15	1/10W 10k ohm
R326	119-1031-15	1/10W 10k ohm
R340	119-1831-15	1/10W 18k ohm
R341	119-1831-15	1/10W 18k ohm
R342	119-1831-15	1/10W 18k ohm
R343	119-1831-15	1/10W 18k ohm
R344	119-3011-15	1/10W 300 ohm
R345	119-3011-15	1/10W 300 ohm
R346	119-5611-15	1/10W 560 ohm
R347	119-1031-15	1/10W 10k ohm
R348	119-1531-15	1/10W 15k ohm
R349	119-2721-15	1/10W 2.7k ohm
R355	116-6201-15	1/4W 62 ohm
R356	116-6201-15	1/4W 62 ohm
R360	119-1041-15	1/10W 100k ohm
R361	119-1331-15	1/10W 13k ohm
R362	119-2721-15	1/10W 2.7k ohm
R363	119-4731-15	1/10W 47k ohm
R380	119-2231-15	1/10W 22k ohm
R381	119-2721-15	1/10W 2.7k ohm
R382	119-1041-15	1/10W 100k ohm
R383	119-4731-15	1/10W 47k ohm
R401	119-1021-15	1/10W 1k ohm
R402	119-1021-15	1/10W 1k ohm
R403	119-1021-15	1/10W 1k ohm
R404	119-1021-15	1/10W 1k ohm
R405	119-1021-15	1/10W 1k ohm
R406	119-1021-15	1/10W 1k ohm
R407	119-4721-15	1/10W 4.7k ohm
R408	119-4721-15	1/10W 4.7k ohm
R409	119-4721-15	1/10W 4.7k ohm
R410	119-4721-15	1/10W 4.7k ohm
R411	119-1011-15	1/10W 100 ohm
R412	119-1011-15	1/10W 100 ohm
R413	119-1011-15	1/10W 100 ohm
R414	119-1011-15	1/10W 100 ohm
R415	119-1011-15	1/10W 100 ohm
R416	119-1011-15	1/10W 100 ohm
R417	119-0000-05	1/10W 0 ohm JW
R419	119-1031-15	1/10W 10k ohm
R422	119-1031-15	1/10W 10k ohm
R423	119-1031-15	1/10W 10k ohm
R424	119-4731-15	1/10W 47k ohm
R425	119-4731-15	1/10W 47k ohm
R426	119-5621-15	1/10W 5.6k ohm
R427	119-1231-15	1/10W 12k ohm
R432	119-1031-15	1/10W 10k ohm
R434	119-4731-15	1/10W 47k ohm
R435	119-4731-15	1/10W 47k ohm
R437	119-2231-15	1/10W 22k ohm
R438	119-1031-15	1/10W 10k ohm
R439	119-5631-15	1/10W 56k ohm
R440	119-1031-15	1/10W 10k ohm
R441	119-1031-15	1/10W 10k ohm
R442	119-5631-15	1/10W 56k ohm
R443	119-5631-15	1/10W 56k ohm
R444	119-5621-15	1/10W 5.6k ohm
R445	119-5621-15	1/10W 5.6k ohm
R446	119-1021-15	1/10W 1k ohm
R447	119-2231-15	1/10W 22k ohm
R451	119-1011-15	1/10W 100 ohm
R452	119-1011-15	1/10W 100 ohm
R453	119-0000-05	1/10W 0 ohm JW
R454	119-2231-15	1/10W 22k ohm

REF No.	PART No.	DESCRIPTION
R455	119-2231-15	1/10W 22k ohm
R456	119-0000-05	1/10W 0 ohm JW
R457	119-0000-05	1/10W 0 ohm JW
R458	119-0000-05	1/10W 0 ohm JW
R460	119-1021-15	1/10W 1k ohm
R461	119-1021-15	1/10W 1k ohm
R501	119-1521-15	1/10W 1.5k ohm
R502	119-1031-15	1/10W 10k ohm
R504	032-0140-62	1/10W 1k ohm F
R505	032-0140-61	1/10W 3k ohm F
R506	032-0140-61	1/10W 3k ohm F
R507	116-4711-15	1/4W 470 ohm
R508	116-1521-15	1/4W 1.5k ohm
R509	116-1521-15	1/4W 1.5k ohm
R510	119-1031-15	1/10W 10k ohm
R511	119-1031-15	1/10W 10k ohm
R512	119-4721-15	1/10W 4.7k ohm
R513	119-1521-15	1/10W 1.5k ohm
R514	119-1031-15	1/10W 10k ohm
R515	119-4731-15	1/10W 47k ohm
R516	119-1541-15	1/10W 150k ohm
R517	119-1041-15	1/10W 100k ohm
R710	119-1051-15	1/10W 1M ohm
R711	119-1051-15	1/10W 1M ohm
R714	119-3321-15	1/10W 3.3k ohm
R715	119-3321-15	1/10W 3.3k ohm
R716	119-2231-15	1/10W 22k ohm
R717	119-1531-15	1/10W 15k ohm
R718	117-3301-15	1/8W 33 ohm
R719	117-3301-15	1/8W 33 ohm
R720	119-1531-15	1/10W 15k ohm
R721	119-2231-15	1/10W 22k ohm
R722	119-5631-15	1/10W 56k ohm
R723	119-5631-15	1/10W 56k ohm
R724	119-1031-15	1/10W 10k ohm
R725	119-1031-15	1/10W 10k ohm
R726	119-2231-15	1/10W 22k ohm
R727	117-3301-15	1/8W 33 ohm
R728	117-3301-15	1/8W 33 ohm
R729	119-2231-15	1/10W 22k ohm
R730	119-1051-15	1/10W 1M ohm
R731	119-1051-15	1/10W 1M ohm
R734	119-3321-15	1/10W 3.3k ohm
R735	119-3321-15	1/10W 3.3k ohm
R736	119-2231-15	1/10W 22k ohm
R737	119-1531-15	1/10W 15k ohm
R738	117-3301-15	1/8W 33 ohm
R739	117-3301-15	1/8W 33 ohm
R740	119-1531-15	1/10W 15k ohm
R741	119-2231-15	1/10W 22k ohm
R742	119-5631-15	1/10W 56k ohm
R743	119-5631-15	1/10W 56k ohm
R744	119-1031-15	1/10W 10k ohm
R745	119-1031-15	1/10W 10k ohm
R746	119-2231-15	1/10W 22k ohm
R747	117-3301-15	1/8W 33 ohm
R748	117-3301-15	1/8W 33 ohm
R749	119-2231-15	1/10W 22k ohm
SUP101	060-0122-91	DSP-141N-S00B
SUP102	060-0122-91	DSP-141N-S00B
TM101	073-0768-90	TERMINAL
TM102	073-0768-90	TERMINAL
TM401	073-0768-90	TERMINAL
TM501	073-0768-90	TERMINAL
X101	061-3013-00	4.33MHz
X201	061-3537-90	41.6MHz
X401	061-3541-90	CRYSTAL 10MHz
PWB	039-3078-00	PWB(WITHOUT COMPONENT)

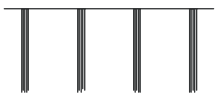
WAVE FORM

	POINT	NAME	FORM	OSCILLOSCOPE		NOTE
				VOLTAGE(V/DIV)	TIME(S/DIV)	
1/5	BL101-PIN8,23	SDA	B05	1	2m	5Vpp, 50uS-10uS(Pulse duration)
1/5	BL101-PIN9,24	SCL	B05	1	2m	5Vpp, 50uS-10uS(Pulse duration)
1/5	BL101-PIN13,28	IFOUT2	A01	50m	40n	150mVpp, 10.7MHz (It depends on SG input level)
1/5	BL101-PIN14,29	IFOUT1	A01	50m	40n	150mVpp, 10.7MHz (It depends on SG input level)
2/5	IC201-PIN28	SCL	B05	1	5m	4Vpp, 2.5uS-10uS(Pulse duration)
2/5	IC201-PIN29	SDA	B05	1	5m	4Vpp, 4uS-10uS(Pulse duration)
2/5	IC201-PIN38,39,43,44	AUDIO OUT	A01	-	-	Audio output 3VppMAX
2/5	IC201-PIN131	OSC IN	A01	1	5n	0.13Vpp, 41.6MHz
2/5	IC201-PIN132	OSC OUT	A01	1	5n	0.35vpp, 41.6MHz
2/5	IC201-PIN136,137,143,144	IF AD	A01	1	25n	150mVpp, 10.7MHz (It depends on SG input level)
4/5	IC402-PIN3	SDA	B05	1	2m	5Vpp, 50uS-10uS(Pulse duration)
4/5	IC402-PIN4	SCL	B05	1	2m	5Vpp, 50uS-10uS(Pulse duration)
4/5	IC402-PIN11	OSC OUT	A01	0.5	25n	0.4vpp, 10MHz
4/5	IC402-PIN13	OSC IN	A01	0.1	25n	2vpp, 10MHz
4/5	IC402-PIN17	M-CAN RX	B05	0.5	5m	4vpp, 2uS-8uS(Pulse duration)
4/5	IC402-PIN18	M-CAN TX	B05	0.5	5m	5vpp, 2uS-8uS(Pulse duration)
4/5	IC402-PIN20	NDS-HU	C05	1	200u	5vpp, 100-500uS(Pulse duration)
4/5	IC402-PIN22	HU-NDS	C05	1	200u	5vpp, 200-600uS(Pulse duration)
4/5	IC402-PIN29	SDA	B05	1	5m	4.5Vpp, 4uS-10uS(Pulse duration)
4/5	IC402-PIN30	SCL	B05	1	5m	4Vpp, 2.5uS-10uS(Pulse duration)
Sub	P701-PIN5	CD-SPDIF	C05	0.5	500n	1.3Vpp, 250nS-500nS(Pulse duration) *Wave form changes

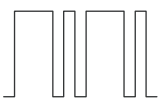
A01



B05

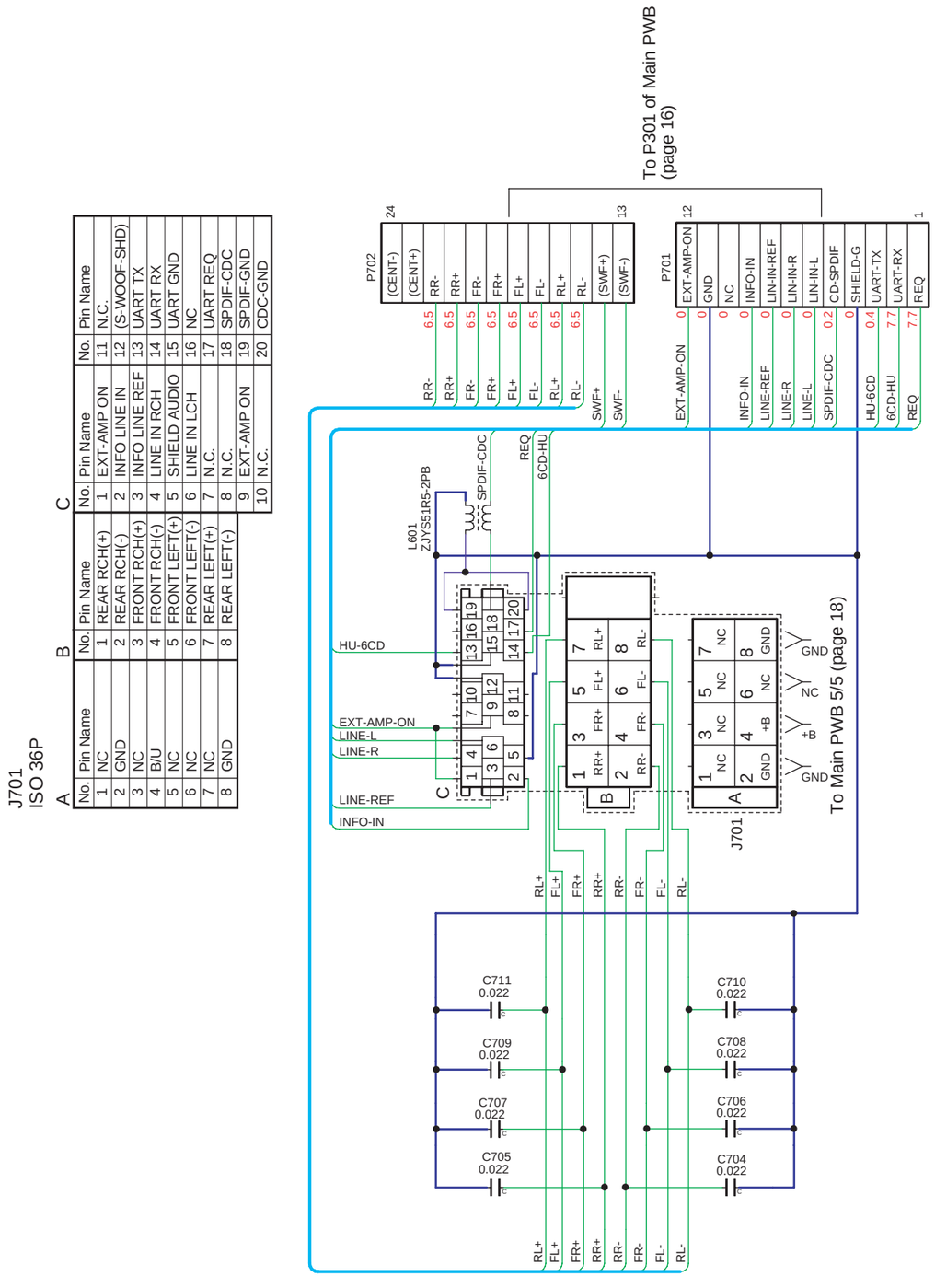


C05



CIRCUIT DIAGRAM

Sub PWB(B1) section



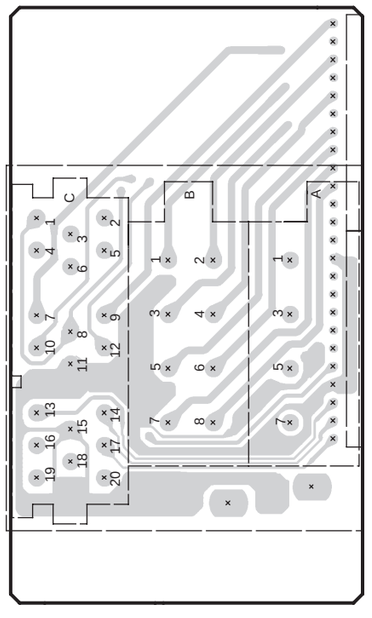
PRINTED WIRING BOARD

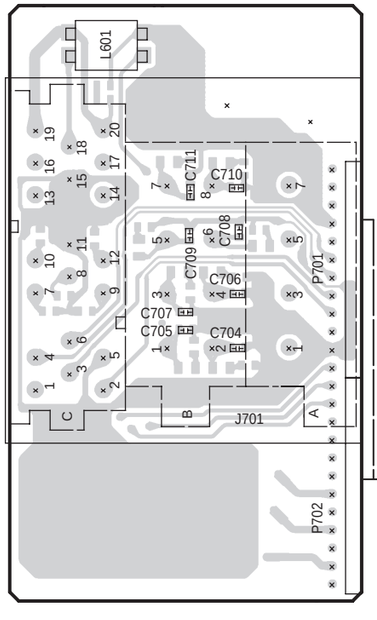
Sub PWB(B1) section

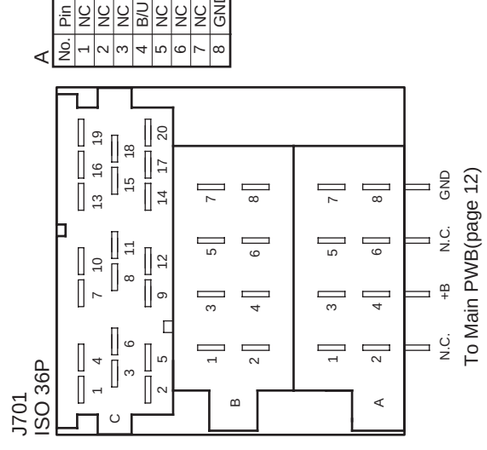
Caution:

COMPONENT SIDE:
Parts on the component side seen from the component side are indicated.

SOLDER SIDE:
Parts on the solder side seen from the solder side are indicated.



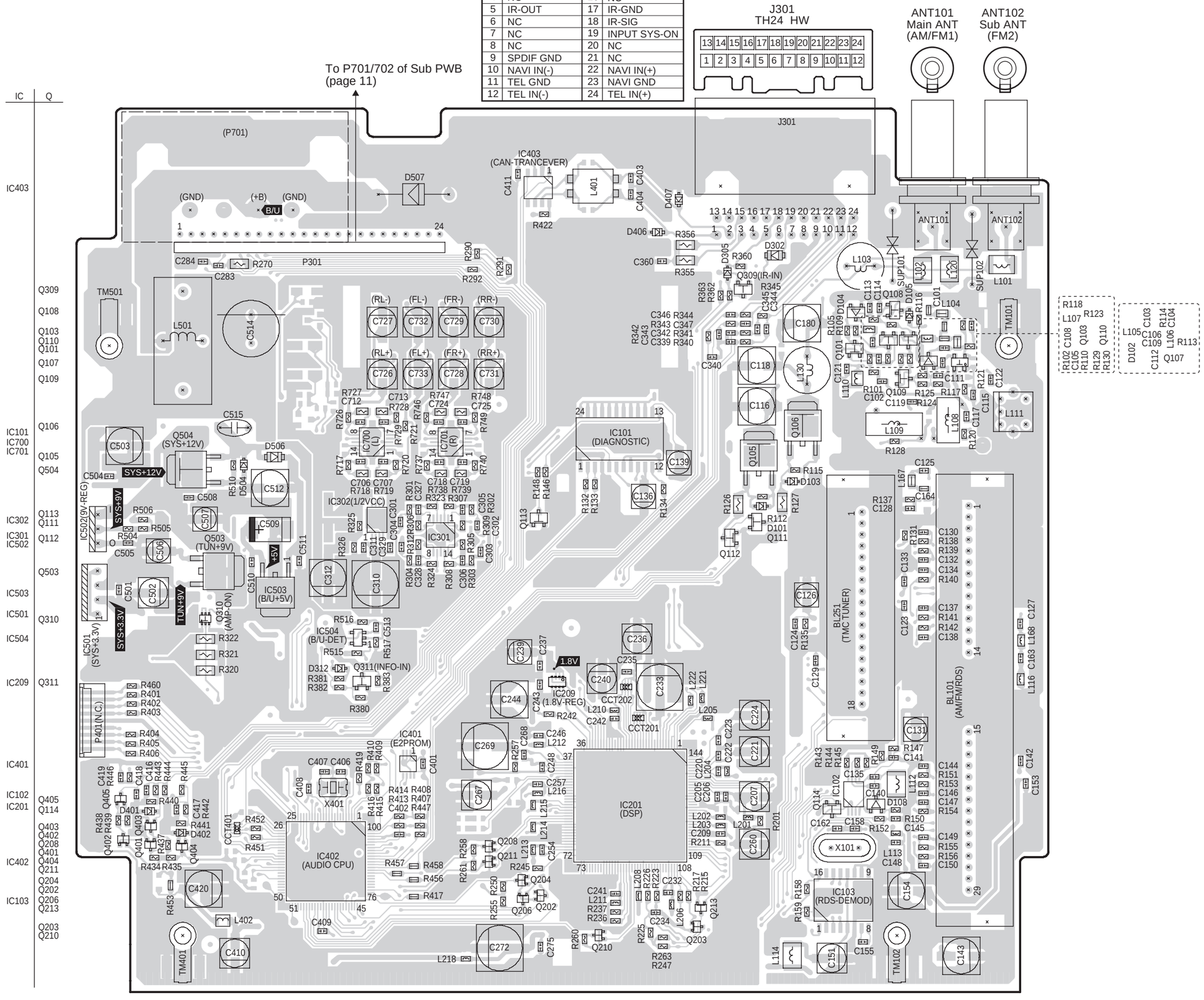




PRINTED WIRING BOARD

Main PWB(B2) section 1/2

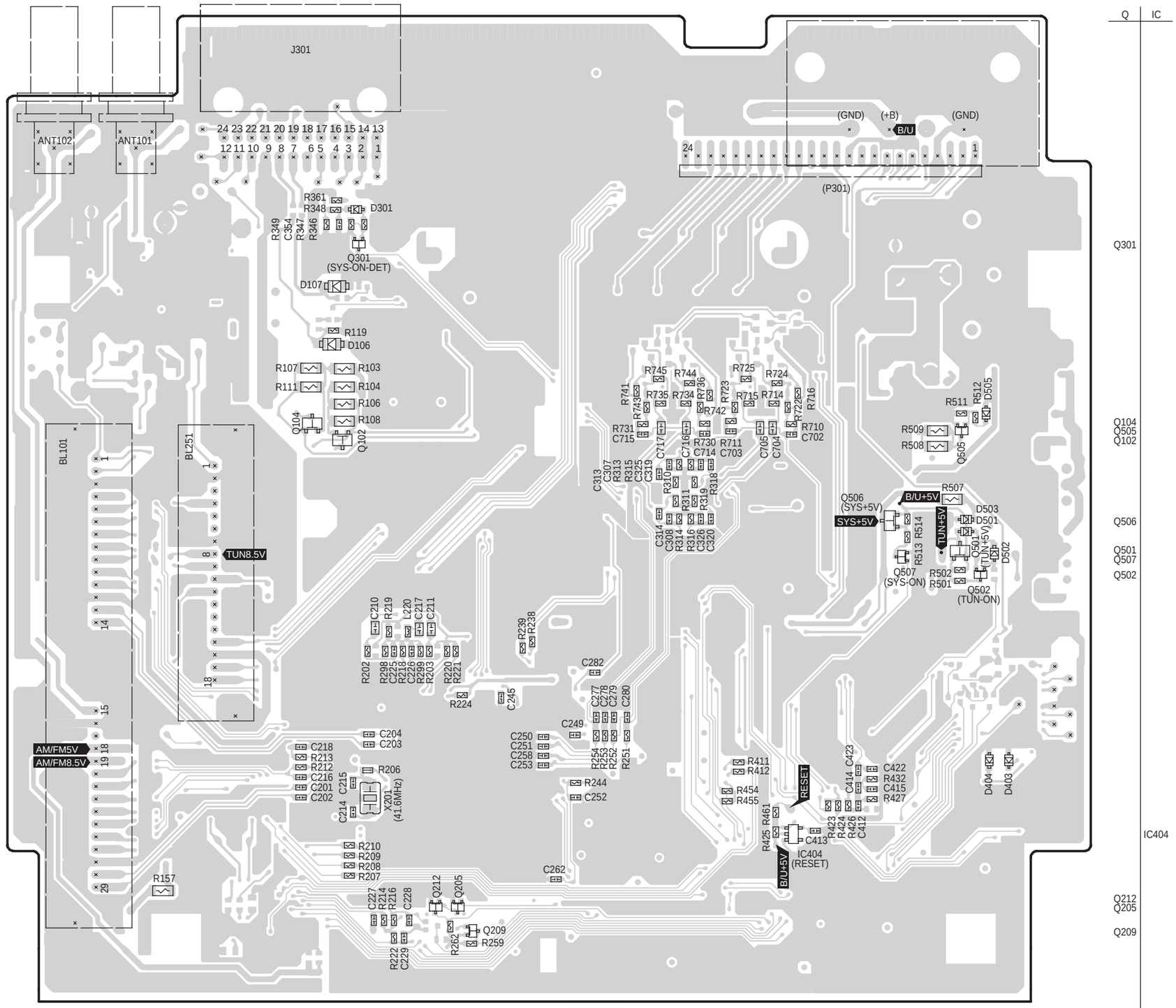
No.	Pin Name	No.	Pin Name
1	M-CAN H1	13	M-CAN H2
2	M-CAN L1	14	M-CAN L2
3	ZT-L	15	ZT-H
4	NC	16	NC
5	IR-OUT	17	IR-GND
6	NC	18	IR-SIG
7	NC	19	INPUT SYS-ON
8	NC	20	NC
9	SPDIF GND	21	NC
10	NAVI IN(-)	22	NAVI IN(+)
11	TEL GND	23	NAVI GND
12	TEL IN(-)	24	TEL IN(+)



Main PWB(B2)

COMPONENT SIDE

Main PWB(B2) section 2/2



Main PWB(B2)

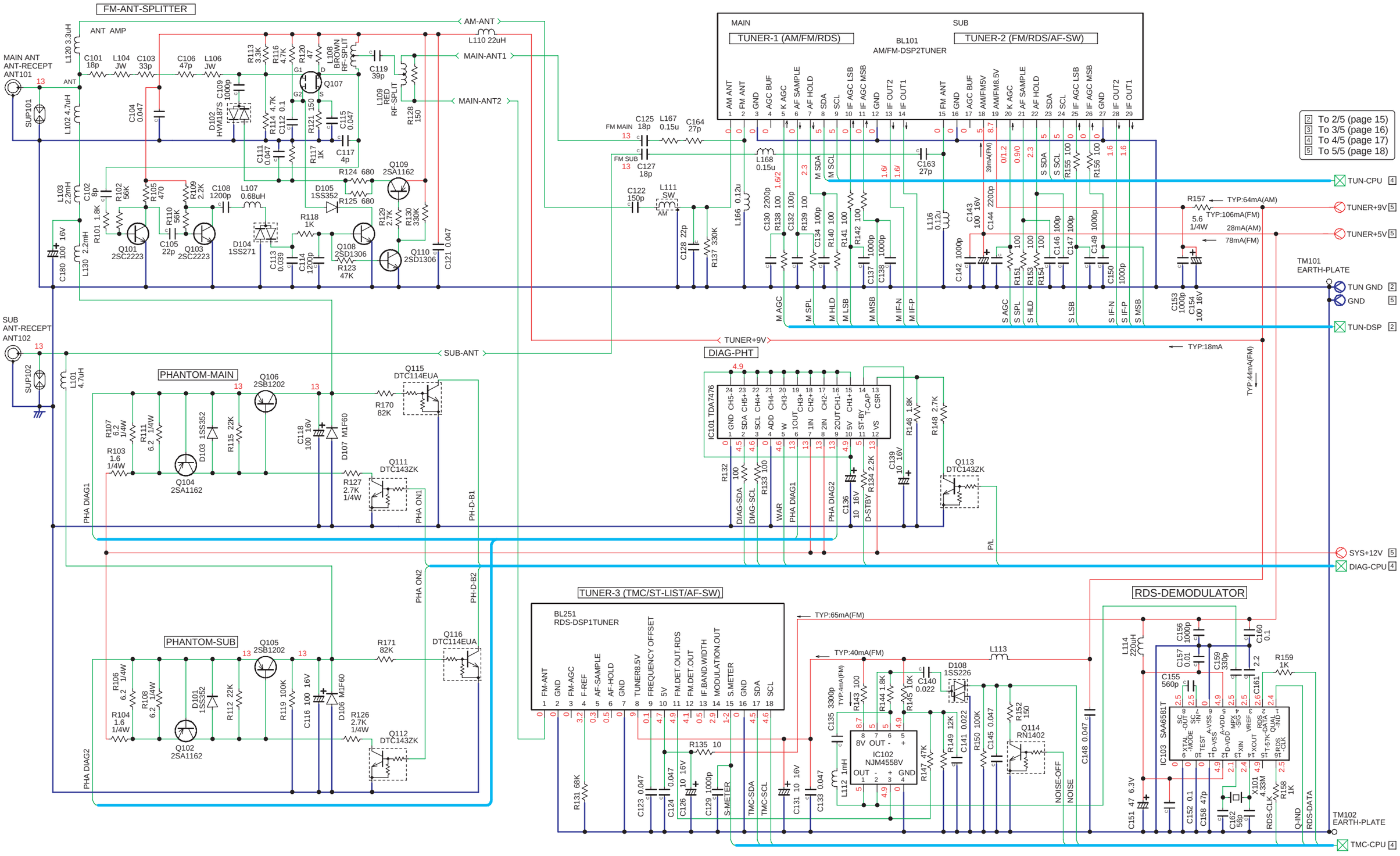
SOLDER SIDE

EN-1286S-A

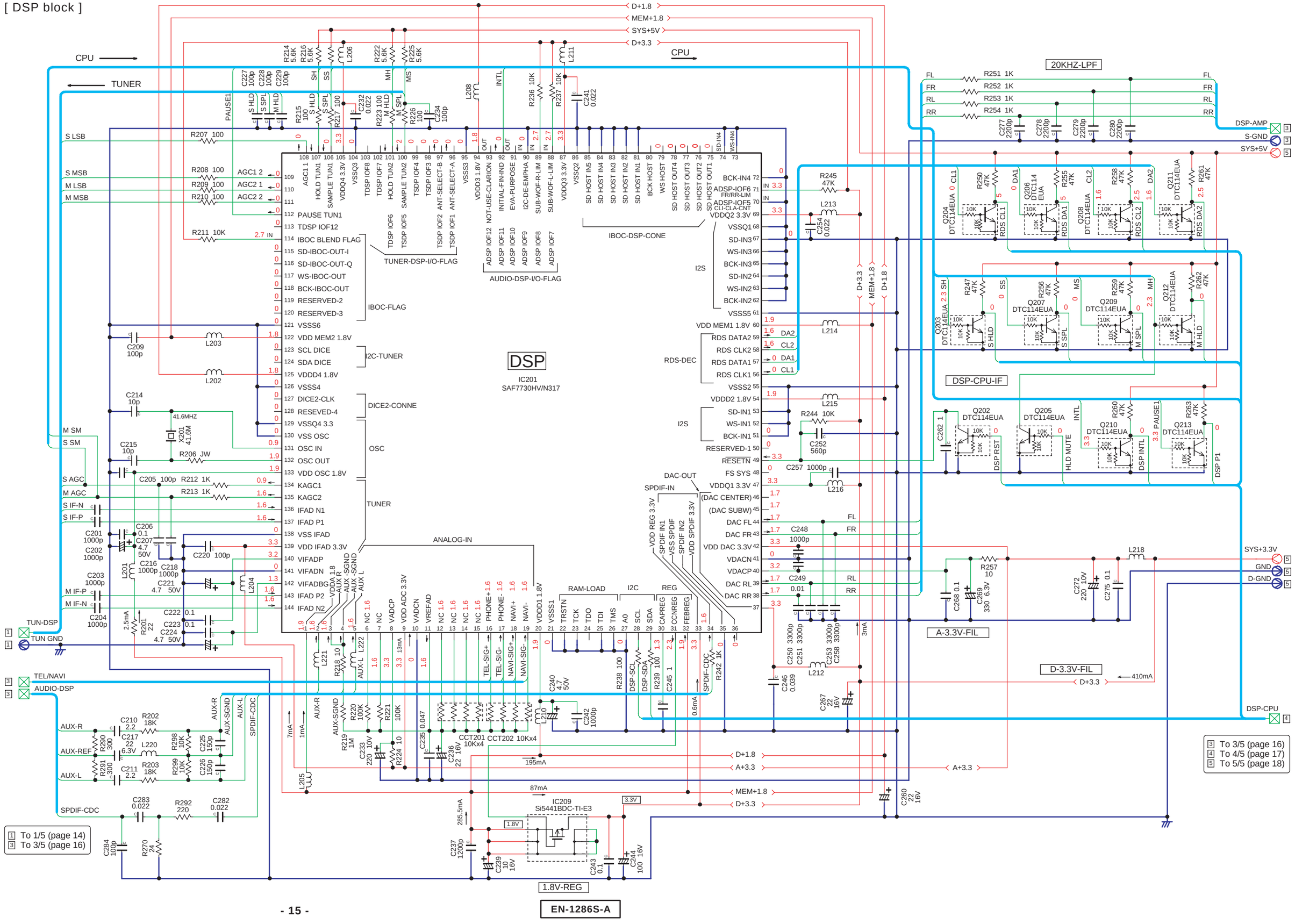
CIRCUIT DIAGRAM

Main PWB(B2) section 1/5

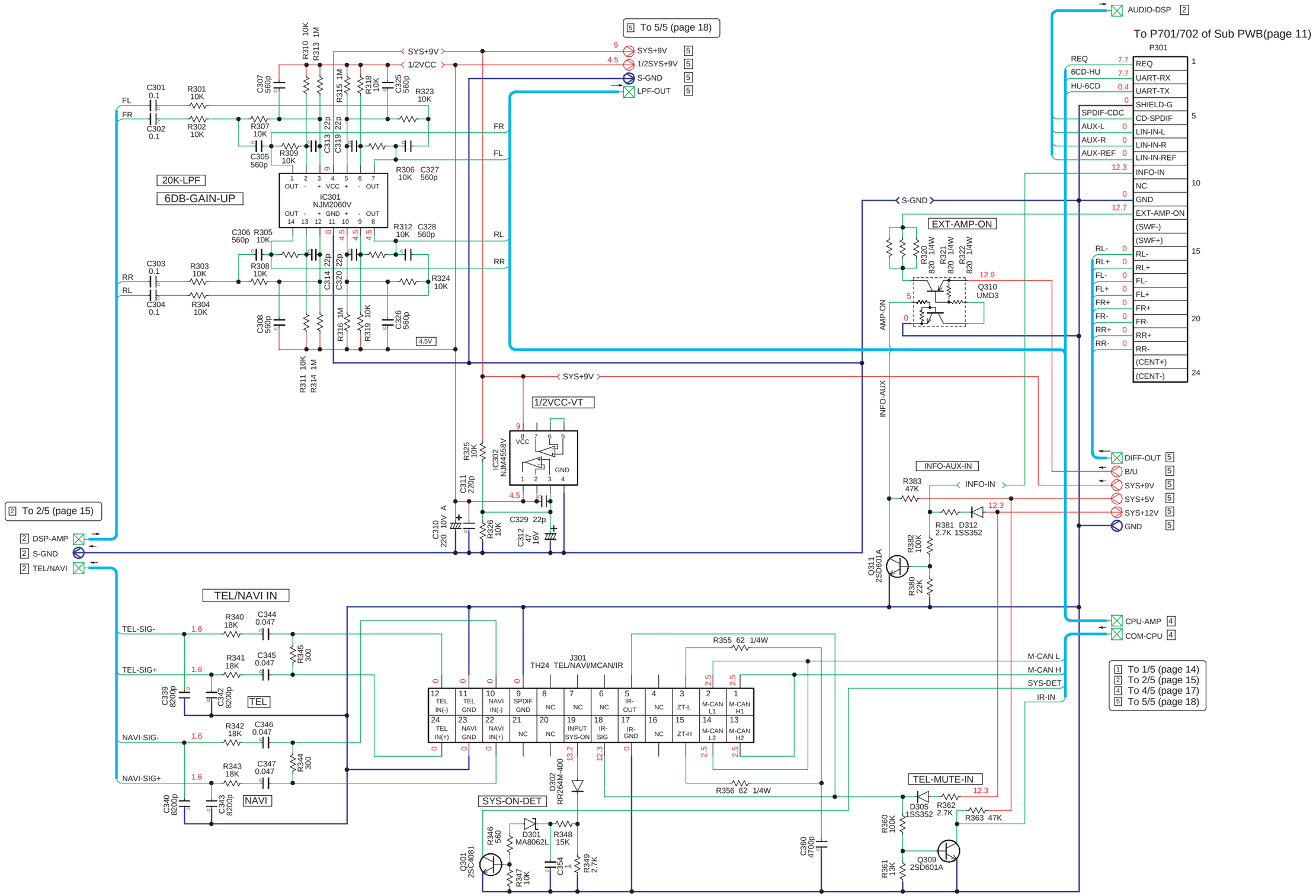
[Tuner block]



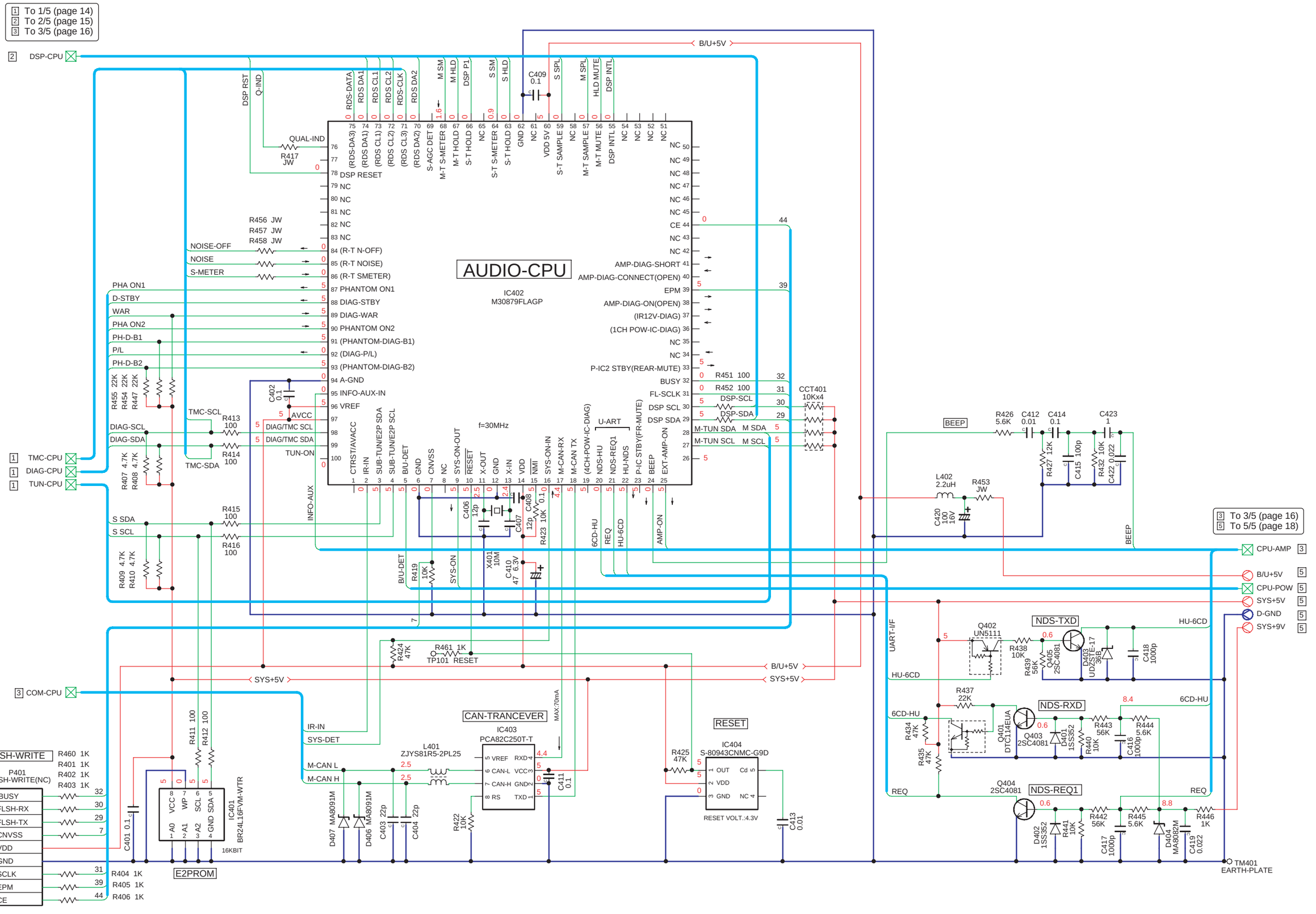
Main PWB(B2) section 2/5
[DSP block]



Main PWB(B2) section 3/5
[Audio IN/OUT block]



Main PWB(B2) section 4/5
[CPU block]



Main PWB(B2) section 5/5
[Power supply, Audio pre-output block]